

*Electrically tiltable  
antenna*

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-320122

(43)Date of publication of application : 10.11.1992

(51)Int.Cl.

H04B 7/26

H01Q 3/36

(21)Application number : 03-088676

(71)Applicant : NIPPON TELEGR & TELEPH  
CORP <NTT>

(22)Date of filing : 19.04.1991

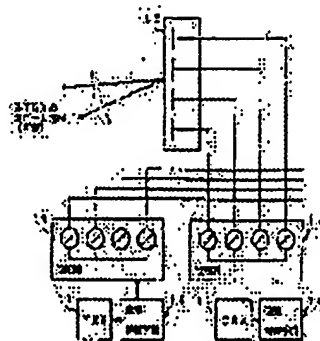
(72)Inventor : FUJII TERUYA

### (54) ANTENNA BEAM CONTROL SYSTEM

#### (57)Abstract:

PURPOSE: To improve the frequency utilization efficiency by monitoring the reception level of a base station or a mobile station or both the base station and the mobile station during talking so as to control a tilting angle in which the reception level versus interference wave level ratio of a same channel is maximized in response to the reception level.

CONSTITUTION: A base station is provided with a beam tilting antenna 12 tilting electrically the in-vertical plane directivity in the direction of an elevating angle at every transmitter-receiver (TRX) 11 corresponding to each channel. Moreover, the system is provided with a phase shifter 13 and a phase control means 14 setting and controlling the tilting angle of the antenna 12 and the means 14 connected to the TRX 11 monitors a reception level and talking quality respectively. The position and the talking quality of a mobile station with respect to a base station are decided in response to the reception level and the talking quality to set a relevant tilting angle. Thus, the same channel interference is reduced and the frequency utilization efficiency is improved.



#### LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of

*Is the phase shifter impl  
described. Can it be  
positioned in the antenna*

rejection]

[Date of requesting appeal against examiner's  
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office